

CLAIMS

What is claimed is:

1. A system for winding film in a camera, comprising:
a camera, including:
 - 5 a front cover including an opening therethrough;
 - a rear cover matingly engaged with said front cover to form a camera housing;
 - a camera body encapsulated between said front cover and said rear cover, said camera body including at a first end a film cassette chamber and at a second end a film roll chamber;
 - 10 a winding wheel rotatably engaged with said camera body proximal to said film cassette chamber and normally rotatable in two directions, a portion of said winding wheel being accessible through said camera housing;
 - an anti-reversal pawl including a fixed end and a free end, said fixed end being fixed proximal to said rear cover, said free end being normally biased to engage said
 - 15 winding wheel and limit rotation of said winding wheel in one direction, at least a portion of said free end being aligned with said opening; and
 - a tool including a pawl engaging member sized to pass through said opening in said front cover and bias said free end of said anti-reversal pawl out of engagement with said winding wheel to permit movement of said winding wheel in both directions.
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2. The system of claim 1, wherein said fixed end is fixed to said camera body proximal said rear cover.
3. The system of claim 1, additionally including a web of film anchored to a film
- 25 cassette loaded into said film cassette chamber of said camera, wherein said web of film is advanced or withdrawn from one side of said camera body to the other side by rotation of said winding wheel.
4. The system of claim 3, wherein said web of film is pre-wound into a roll inside
- 30 said film roll chamber prior to use by a consumer, and wherein said anti-reversal pawl is

normally biased to permit the winding wheel to rotate only in a first direction to advance said web of film into said cassette when said winding wheel is rotated.

5. The system of claim 4, wherein said tool is used to push said free end of said anti-reversal pawl away from said front cover and out of engagement with said winding wheel to permit said web of film to be pre-wound.

6. The system of claim 5, wherein said free end of said anti-reversal pawl includes a tab that extends above said winding wheel, wherein said pawl engaging member passes through said opening and engages said tab to push said free end.

7. The system of claim 6, wherein said tool is handheld.

8. The system of claim 6, wherein said camera additionally includes a film sprocket assembly rotatably engaged to said camera body and additionally engageable with said web of film, said film sprocket assembly releasably locking in response to said winding wheel advancing one frame of film into said cassette, wherein said front cover includes a second opening and said tool includes a sprocket release member sized to pass through said second opening and release said sprocket for free rotation depending upon the direction of travel of said web of film engaged with said film sprocket.

9. The system of claim 8, wherein said camera additionally includes a release claw pivotally engaged with said camera body, said release claw engageable with said film sprocket assembly to lock said film sprocket in response to said winding wheel advancing one frame of film into said cassette, a portion of said release claw being aligned with said second opening and engageable with said sprocket release member to release said film sprocket for free rotation.

10. The system of claim 9, wherein said release claw includes a projection aligned with said second opening, wherein when said sprocket release member is passed through

said second opening and engaged with said projection, said release claw is pivoted out of engagement with said film sprocket, permitting said film sprocket to rotate without locking.

5 11. The system of claim 10, wherein said pawl engaging member is located on said tool in parallel with said sprocket release member.

12. The system of claim 11, wherein said tool is handheld.

10 13. A method for winding film in a camera, comprising:

(a) providing a camera, including:

 a front cover including an opening therethrough;

 a rear cover matingly engage with said front cover to form a camera housing;

 a camera body encapsulated between said front cover and said rear cover, said camera

15 body including at a first end a film cassette chamber and at a second end a film spool chamber;

 a winding wheel rotatably engaged with said camera body proximal to said film

 cassette chamber and normally rotatable in two directions, a portion of said

 winding wheel being accessible through said camera housing;

20 an anti-reversal pawl including a fixed end and a free end, said fixed end being fixed proximal to said rear cover, said free end being normally biased to engage said winding wheel and limit rotation of said winding wheel in one direction, at least a portion of said free end being aligned with said opening; and

(b) loading a web of film into said camera, said web of film anchored to a film cassette

25 loaded into said film cassette chamber;

(c) providing a tool including a pawl engaging member sized to pass through said opening in said front cover and bias said free end of said anti-reversal pawl out of engagement with said winding wheel to permit movement of said winding wheel in both directions; and

- (d) inserting said pawl engaging member of said tool through said opening in said front cover and biasing said anti-reversal pawl away from said winding wheel; and
- (e) winding said film after steps (a) – (c) and during step (d).

5 14. The method of claim 13, wherein said camera additionally includes a film spool located in said camera body, opposite said film cassette, said film spool including a winding socket accessible through said housing, wherein the free end of said web of film is attached to said film spool prior to closing said housing and wherein said winding step is performed by inserting a spindle into said winding socket and winding said web of film
10 onto said spool while said anti-reversal pawl is disengaged from said winding wheel.

15 15. The method of claim 14, wherein said camera additionally includes a film sprocket assembly rotatably engaged to said camera body and additionally engageable with said web of film, said film sprocket assembly releasably locking in response to said
15 winding wheel advancing one frame of film into said cassette, wherein said front cover includes a second opening and said tool includes a sprocket release member sized to pass through said second opening during said inserting step and release said sprocket for during said winding step.

20 16. The method of claim 15, wherein said camera additionally includes a release claw pivotally engaged with said camera body, said release claw engageable with said film sprocket assembly to lock said film sprocket in response to said winding wheel advancing one frame of film into said cassette, a portion of said release claw being aligned with said second opening and engageable with said sprocket release member during said inserting
25 step to release said film sprocket for free rotation during said winding step.

17. The method of claim 16, wherein, said tool biases said anti-reversal pawl by pushing said free end away from said front cover.

30 18. A system for pre- winding film in a single-use camera, comprising:

a camera, including:

a front cover including first and second openings therethrough;

a rear cover matingly engaged with said front cover to form a camera housing;

a camera body encapsulated between said front cover and said rear cover;

5 a winding wheel rotatably engaged with said camera body, a portion of said winding wheel accessible through said camera housing;

an anti-reversal pawl including a first end fixed to said camera body proximal to said rear cover, and a free end normally biased to engage said winding wheel to limit rotation of said winding wheel in one direction, at least a portion of said free end
10 being aligned with said first opening;

a web of film connected at one end to a film cassette in communication with said winding wheel and connected at the other end to a film spool;

a film sprocket assembly engaged with said web of film between said film cassette and said film spool, said film sprocket assembly including a film sprocket and a
15 locking member, said locking member for periodically locking said film sprocket after a predetermined length of film has been advanced, a portion of said locking member being aligned with said second opening;

a tool including a pawl engaging prong and a locking member engaging prong sized to pass through said first and second openings, respectively, to simultaneously bias said
20 free end out of engagement with said winding wheel and said locking member away from said film sprocket to permit free movement of said winding wheel and said film sprocket during film pre-winding.

19. The system of claim 18, wherein said pawl engaging prong pushes said free end
25 towards said back cover.

20. The system of claim 19, wherein said film spool includes a socket accessible from outside the housing, and the film is pre-wound using said socket while said tool is passed through said front cover.

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